

# Philippines - Revenue Administration Reform

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# Overview

## Identification

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**COUNTRY**

Philippines

**EVALUATION TITLE**

Revenue Administration Reform

**EVALUATION TYPE**

Independent Evaluation

**ID NUMBER**

DDI-MCC-PHL-SWS-RARP-2015-V01

## Version

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**VERSION DESCRIPTION**

Anonymized dataset for public distribution

## Overview

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**ABSTRACT**

The Millennium Challenge Account-Philippines' (MCA-P) implementation of the Revenue Administration Reform Project (RARP) is expected to improve tax administration, increase tax revenue collection and reduce incidence of corruption among various agencies involved in the tax administration processes including the Department of Finance (DOF), the Bureau of Internal Revenue (BIR) and the Bureau of Customs (BOC).

One of the main objectives of the RARP evaluation is to measure via a baseline and endline changes brought about by the project components on the following: (1) efficiency of tax administration, (2) tax revenue, and (3) incidence of corrupt activities in the DOF, BOC, and BIR. Given the non-random nature of RARP interventions across different components, the RARP evaluation will be primarily based on a quantitative analysis and a qualitative assessment of implementation of various components of RARP. The quantitative analysis component of RARP evaluation will attempt to identify changes in critical indicators before and after the implementation of the RARP by comparing the baseline values with the post intervention data to be obtained from the follow up round(s) of taxpayers' and personnel survey and other administrative sources whenever feasible to get such data.

In an ideal situation, the most rigorous evaluation would have been a randomized design where participating offices are randomly assigned to receive one or more components of RARP and then their performances over time are compared with the counterfactual (in this case, the offices not exposed to RARP components). However, based on the information received from MCA-P regarding the (non-random) selection of offices for treatment and implementation of RARP components such as eTIS, AATs, and RIPS, and the lack of a plausible counterfactual, it was determined that a rigorous randomized impact evaluation was not possible for this study.

Thus, the evaluation involves a comparison of 2014 baseline data and 2015 follow-up data from surveys of businesses, individual taxpayers, and personnel from the DOF, BIR and BOC. MCA-P engaged the services of a data collection firm, Social Weather Stations (SWS) which collected the baseline and follow-up data. This data was subjected to a data quality review and then shared with NORC for analysis. The baseline data was collected during July 2014 - December 2014. The follow-up data was collected during September 2015 - January 2016.

Statistical analysis was used to identify whether there exist any statistically significant differences between the baseline and the follow-up values. Though the RARP Activities of chief concern for Study V have not yet been completely deployed, it is expected that this evaluation will help MCC to learn about the process of implementation of different components of the RARP and its influences on the tax administration and compliance.

**EVALUATION METHODOLOGY**

Pre-Post

**UNITS OF ANALYSIS**

individuals, corporations

**KIND OF DATA**

Sample survey data [ssd]

## Coverage

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**GEOGRAPHIC COVERAGE**

National Coverage

**UNIVERSE**

All Individual and Corporate Taxpayers

All Bureau of Internal Revenue, Bureau of Customs, and DOF Personnel

## Producers and Sponsors

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**PRIMARY INVESTIGATOR(S)**

Name	Affiliation
NORC at the University of Chicago	

**OTHER PRODUCER(S)**

Name	Affiliation	Role
Social Weather Stations		Carried out data collection

**FUNDING**

Name	Abbreviation	Role
Millennium Challenge Corporation	MCC	

## Metadata Production

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**METADATA PRODUCED BY**

Name	Abbreviation	Affiliation	Role
Social Weather Stations			Conduct data collection
NORC at the University of Chicago			Documentation of the study

**DATE OF METADATA PRODUCTION**

2016-05-20

**DDI DOCUMENT VERSION**

Version 1

**DDI DOCUMENT ID**

DDI-MCC-PHL-SWS-RARP-2015-V01

## MCC Compact and Program

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**COMPACT OR THRESHOLD**

Philippines Compact

**PROGRAM**

The Revenue Administration Reform Project addresses the need to raise tax revenues and reduce tax evasion and revenue

agent-related corruption. A key constraint to economic growth in the Philippines is the lack of growth enhancing investments in public goods such as infrastructure and social services. This project will focus on increasing the efficiency and sustainability of revenue collection through a redesign and computerization of business processes. The project will narrow the gap between potential and actual collections by reducing the discretion of individual tax and customs collection officers, and help improve the predictability and impartiality with which revenue laws and regulations are enforced. Some of these activities are extensions of the Philippines' threshold program activities that concluded in May 2009.

## **MCC SECTOR**

Capacity Building and Institutional Development (Cap Bldg & Inst Dev)

## **PROGRAM LOGIC**

1. BIR revenue administration reform activity a. eTIS sub-Activity MCA-P funding will provide an International Monetary Fund ("IMF") resident advisor on tax administration and support the cost of short-term IMF tax administration specialists as well as other systems and technology consultants, the training of BIR staff, and the procurement of equipment related to the implementation of eTIS. b. Automated Auditing Tools sub-Activity MCA-P will purchase software licenses for automated auditing tools and provide computers to run them. It will also pay for a subscription to a data base service to provide BIR with transfer pricing information and provide training for the use of these tools. c. Public Awareness Campaign sub-Activity Funding will be provided for consulting services and to support the costs of implementing a public awareness campaign regarding BIR services and programs. Individuals and businesses in the Philippines have a limited understanding of their tax obligations and BIR programs. Under this sub-activity would also include a change management program for the internal organization of the BIR. 2. Revenue Integrity Protection Service ("RIPS") activity a. Funding will be provided for the acquisition and customization of case management software, a related data depository system, and training. This will support RIPS, a relatively new unit within the Department of Finance, and is intended to strengthen surveillance and discipline of the Department of Finance and its attached agencies through administrative actions such as temporary suspensions or dismissals.

# Sampling

## Study Population

All Individual and Corporate Taxpayers All Bureau of Internal Revenue, Bureau of Customs, and DOF Personnel

## Sampling Procedure

### Sample Size Calculation

#### Assumptions:

? Alpha - use default value of 0.05

? Beta - use default value of 0.20

? Power - equal to 1 - beta or 0.80

? Population variance - because the effect size is standardized in terms of standard deviation units, we can assume, based on the sample size formulas for the two-sample t-test (the relevant statistical test in this case), that the standard deviation is equal to 1. The two-sample t-test will be used to analyze and compare the results for the baseline and endline surveys, i.e. the pretest and posttest, respectively.

? Effect size - It is 0.2 standard deviations change in indicators, i.e. mean differences in standardized indicator scores is equal to 0.2 standard deviations. For LTS, the effect size was changed from .2 to .3.

### Selection Process (Taxpayers):

The data collection firm, Social Weather Station (SWS), utilized a 3-stage sampling approach for the identification of the different respondents to the surveys. They involved:

- 1) Selection of Revenue Regions (RRs),
- 2) Selection of Revenue District Offices (RDOs) within the sampled RRs, and
- 3) Allocation and selection of respondents within the sampled RDOs.

#### 1) Selection of Revenue Regions (RRs),

There are 19 Revenue Regions nationwide. 4 original eTIS regions were preselected. These are Makati, Caloocan, Manila and Quezon City RRs. The remaining 6 regions sampled with probability proportional to the collection of the RR. RRs with higher collections have greater chance of being selected compared to RR's with smaller collections. At the time of sampling, the most recent available data was the revenue collection based on the BIR 2011 Annual Report.

#### 2) Selection of Revenue District Offices (RDOs) within the sampled RRs

Within each sampled RR including the four preselected RRs, 3 RDOs were selected using probability proportional to the RDO's collection. Cumulative collections were computed and random numbers generated, similar to the procedure discussed in the selection of RRs. SWS sampled the RDOs within the RR. This yields 30 sampled RDOs.

#### 3) Allocation and selection of respondents within the sampled RDOs.

Respondents were allocated proportionally by SWS among the sampled RRs and RDOs. This means that RRs and RDOs with larger revenue collections had more respondents than those with smaller collections. Within each RDO, simple random sampling was used to generate respondents for each of the quantitative surveys.

**Sampling Frame** - The content of the BIR's taxpayers database was used as the sampling frame.

**Sampling of Taxpayer Respondents** (Corporations, Self-employed/Single proprietors, Professionals, eTIS Roll-out Regions and Large Taxpayer Service) - given the strict confidentiality of the taxpayer database, the sampling of taxpayer respondents was done by BIR. First sampled were Taxpayer Account Management Program (TAMP) respondents for the survey of corporations, selfemployed/ single proprietors and professionals, followed by the non-TAMP respondents. Respondents were allocated into 80% TAMP and 20% non-TAMP. For the eTis roll-out regions of Makati, Caloocan, Manila and Quezon City, since the respondents were also the taxpayers in these cities, the sampling frame used was the combined taxpayer corporations, self-employed/single proprietors and professionals which were not sampled (either as respondents or substitute respondents) in the survey of corporations, self-employed/single proprietors and professionals. Similarly, the respondents were allocated into 80% TAMP and 20% non-TAMP.

### Selection Process (BIR personnel):

The survey of BIR employees included not only the BIR employees at the RDO level but also those in the RR level and National Offices. Respondents were proportionally allocated based on the number of BIR employees among the sampled RRs and RDOs, including the Revenue Region Offices and National Offices.

**Selection Process (BOC personnel):**

The full list of BOC employees was used as the sampling frame. Initially, the plan was to have BOC employee respondents in the same sample RDOs and RRs. However, after classifying the BOC port groups into different cities, municipalities, and provinces, and matching them with the sample RRs and RDOs for the survey, the bulk of the BOC employees proportionally allocated were found in the National Office, Manila and Pasay City.

**Selection Process (DOF personnel):**

Unlike the survey of taxpayers, BIR employees and BOC employees which had respondents at the provincial level, the DOF employees were situated in a single office location in Manila. The full list of DOF employees was used as the sampling frame. Simple random sampling to generate the list of respondents.

**Replacement lists:**

The lists of replacement respondents, which should be within the same RDO of the originally sampled respondent, were also generated. Given SWS's experiences on the difficulty of interviewing pre-listed enterprise manager respondents-either the target respondent could not be located in the given address, unavailability of the respondent given the fieldwork period, or refusal of the respondent to be interviewed-10 target respondents were generated for every 1 sample identified in order to allow for

replacement of respondents. For instance, if 10 respondents were needed in an RDO, 100 taxpayers were randomly selected, with the first 10 being the original respondents and the remaining 90 as substitute respondents in case any one of the original respondents had to be replaced.

**Strategy for absent respondents/not found/refusals (replacement or not)**

Respondents were replaced after three tries.

## Deviations from Sample Design

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All in all, SWS conducted a total of 1,613 interviews as of December 29, 2014. MCA-P decided to finish off the fieldwork even if the target sample size of 2,300 had not been completed as the replacement list had been exhausted in some taxpayer types.

**2nd round:**

For the taxpayer surveys, the protocol in locating respondents were changed. Instead of going down the list of replacement in order, the field supervisors were allowed to cluster the substitute taxpayer master lists by actual proximity to the original taxpayer-respondents being replaced. The proximity should be limited to a small geographic location within a given political or administrative jurisdiction, such as barangay, or in the case of medical professionals, within a hospital or medical facility.

For the personnel survey, no substitutions were made in the second round of data collection, as the attrition rates for all three agencies were below the 20% threshold required to draw substitute respondents. Prior to the start of the surveys, MCA-P and SWS agreed that substitution of personnel-respondents would only be done if the attrition rate of personnel-respondents is more than 20% considering that staff rotation and re-assignment/secondment are quite common in DOF, BIR and BOC. Should the threshold of 20% attrition rate be reached, the substitute personnel-respondent would have been chosen through simple random sampling, with the provision that they will be drawn from the master list of personnel from the SAME location and/or office of the personnel-respondent in the first round of the data collection.

## Response Rate

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**Required Sample Size and Actual Sample Size****Sample Size Baseline 2nd Round**

	No of Completed Interviews	% of Completed Interviews	No of Completed Interviews	% of Completed Interviews
Corporations	300	217 72%	201	67%
Single Proprietors	300	97 32%	121	40%
eTIS Roll-Out	300	233 78%	193	64%
Large Taxpayer Service	200	98 49%	113	57%
Professionals	300	75 25%	148	49%
DOF employees	300	300 100%	262	87%
BIR employees	300	297 99%	271	91%
BOC employees	296	99%	247	83%

## Weighting

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No weights are implemented in this analysis.

# Questionnaires

## Overview

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1. Socio-demographic profile of taxpayers/ respondents
2. Extent of compliance with tax obligations
3. Perception of corruption by taxpayers on BIR
4. Level of awareness of the RIPS-DOF efforts to curb corruption and perception of corruption in DOF
5. Experiences in availing BIR of core processes and services
6. Level of awareness of taxpayers with regard to their tax obligations
7. Level of awareness of taxpayers of BIR services and programs in the areas of tax registration and filing
8. Level of satisfaction of taxpayers with BIR's respective services and programs used
9. Perception on the likelihood of being caught by BIR and/or RIPS- DOF for non-compliance to tax obligations (e.g. tax evasion) and if caught, the likelihood of severe penalties
10. Feedback on the automated systems in terms of promoting operational efficiency and reducing discretion and opportunities for corruption
11. Perception of corrupt activities in DOF, BIR, and BOC
12. Awareness of and support for DOF efforts to address corrupt practices



## Data Collection

### Data Collection Dates

Start	End	Cycle
2014-07-01	2015-12-15	Baseline
2015-09-30	2016-01-18	Follow-up

### Data Collection Notes

#### 1st round

Training of SAs for the pilot testing of TAXPAYER questionnaires was held on Apr 22, 2014. After revising the questionnaires, SAs were retrained on Apr 30, 2014. Actual pilot testing was done on May 2, 5, and 6, 2014. For the PERSONNEL questionnaire, cognitive testing was done on May 6, 2014.

The Central training were done as follows: training of SAs on Jun 4-5, 2014; training of EIs (NCR) on Jun 9-11, 2014; refresher training of EIs (NCR) on Jun 25-26, 2014.

Fieldwork for the first round data collection was conducted from July 1, 2014 to December 15, 2015.

#### 2nd round

The cognitive testing of the Personnel Questionnaire was conducted on August 25, 2015. Three regional training of executive interviewers were conducted: for the first batch of interviewers assigned in NCR on September 7-9 in at PSSC Auditorium, Quezon City<sup>1</sup>; for the interviewers assigned in Visayas and Mindanao on October 5-7 in Cebu City; for the second batch of NCR interviewers, and interviewers in Legazpi and San Fernando on October 13-15 at PSSC Auditorium, Quezon City.

Fieldwork for the second round data collection was conducted from September 30, 2015 to January 18, 2016.

### Questionnaires

1. Socio-demographic profile of taxpayers/ respondents
2. Extent of compliance with tax obligations
3. Perception of corruption by taxpayers on BIR
4. Level of awareness of the RIPS-DOF efforts to curb corruption and perception of corruption in DOF
5. Experiences in availing BIR of core processes and services
6. Level of awareness of taxpayers with regard to their tax obligations
7. Level of awareness of taxpayers of BIR services and programs in the areas of tax registration and filing
8. Level of satisfaction of taxpayers with BIR's respective services and programs used
9. Perception on the likelihood of being caught by BIR and/or RIPS- DOF for non-compliance to tax obligations (e.g. tax evasion) and if caught, the likelihood of severe penalties
10. Feedback on the automated systems in terms of promoting operational efficiency and reducing discretion and opportunities for corruption
11. Perception of corrupt activities in DOF, BIR, and BOC
12. Awareness of and support for DOF efforts to address corrupt practices

### Data Collectors

Name	Abbreviation	Affiliation
Social Weather Stations	SWS	

### Supervision

#### 1st round

There were 2 field teams headed by a field team leader. They are supported by 15 Survey anchors. The Survey

Anchors (SAs), in turn, supervised the work of 24 provincial anchors (PAs) and 218 executive interviewers (EIs). In addition, there was 1 data management team headed by the Data Manager, 5 data processing assistants, 20 data encoders and validators.

## 2nd round

There were 3 field teams headed by a field team leader. These three field team leaders were supported by a Field Project Manager and a Field Project Assistant. Each field team had 4 interview teams composed of 1 Survey Anchors and 16 executive interviewers (EIs). In addition, there was 1 data management team headed by the Data Manager, 3 data processing assistants, 20 data encoders, and 20 field validators.

### Conducting and supervising the surveys

**Start-off.** Relevant permits and clearances were be obtained from concerned offices and agencies prior to start of fieldwork. Immediately following the last day of local training is the start-off (i.e. the first day of survey fieldwork). As in the schedule of the training, the start-off for NCR RRs will be a week ahead of those in non-NCR RRs. The non-NCR SAs who were present during the local training in NCR RRs continued to observe the start-off activities before they travelled to their respective areas of assignment. The start-off were held in the same RDOs/ areas where the local trainings were conducted. The field staff were reconvened for a clearing session after the start-off interviews to discuss their experiences in implementing the interviews and to address problems that may arise along the way.

The SAs then dispatched the assignments and distribute questionnaires and other survey paraphernalia to the EIs. Then, the PAs and EIs travelled to the respective RDOs where they were assigned. The SA planned their schedule so that they were able to visit all RDOs to monitor the fieldwork and conduct quality checks.

# Data Processing

## Data Editing

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Supervision, output monitoring, and quality checks.

The EIs will be in charge of setting appointments with the respondents that have been assigned to them (including initial calls and follow ups). The SA, with the assistance of her PA(s) will monitor the appointments that have been made in order for them to come up with a schedule of observing, spot checking, and back checking of the required proportion or subset of interviews. The SAs will monitor and consolidate the number of interviews completed in her area of assignment by type of respondent. She will relay these numbers to the FT-Quanti1 and FTQuanti2 every two weeks following a template that will be discussed during the TOT. In turn, the Field Team Leader will consolidate the numbers to come up with periodic output progress reports (every two weeks or fourteen days of fieldwork) for the reference of other SWS key personnel and MCA-P

At the RR level, the assigned SA will be primarily in charge of supervising the EIs. As shown earlier in the field staffing matrix, each RR will have at least one SA. Given that surveys will be simultaneously implemented in the sample RDOs within that RR, the PA will take on the role of supervisor during the time when SA is in another RDO. The TOR stipulates that the Field Team Leaders must observe 10% of fieldwork. This is equivalent to 230 survey interviews. As per standard practice of SWS, the questionnaires will have a “field control” checklist to make sure that the required proportion of interviews are observed.

However, given that the survey interviews will be simultaneously conducted in widely dispersed geographic areas, the task of observing the fieldwork will be devolved to the level of supervising anchors and provincial anchors in each RR (The Field Team Leaders will still conduct observation in selected areas, prioritizing “problem areas,” if any). The field supervisors (i.e. the supervising anchors and provincial anchors) must ensure that they are able to observe (i.e. an act, usually unannounced, wherein the SA or PA observes the entire/ full implementation of an interview) or spot check (i.e. an act, usually unannounced, wherein the SA or PA observes a substantive portion of an interview) at least 10% of the interviews. In conducting the observation/ spot checking, the first few surveys to be implemented by the executive interviewers will be given priority to immediately identify errors, if any, and address potential difficulties.

As for the balance interviews (i.e. the remaining 90% which are not observed or spotchecked), the field supervisors will conduct random back checking [i.e. an act, usually unannounced, wherein the SA or PA checks the coverage and interviews of the interviewer by going back to the respondent (either in person or via phone) to ask a set of questions regarding the survey interview].

The Contract specifies that 10% of the completed questionnaires shall be physically checked to identify errors made by the interviewers. To do this, the field supervisors will conduct field editing of completed questionnaires (i.e. an act wherein the SA or PA physically checks the questionnaires for completeness and consistency). Field editing allows the SA or PA to make sure that all questions in the questionnaire are completely filled, check adherence to skipping instructions, and verify consistency by comparing answers to related questions. The first few sheets completed by the interviewers will be given priority, making sure that all points are correctly covered and answers are recorded properly and completely.

Field editing of interviews should be done for all interviewers. Should there be errors found in the interviews, the field supervisor will put notations or comments on the questionnaires and promptly inform the concerned interviewers about the errors, if any, so that they will not commit similar mistakes again. If the errors cannot be corrected based on existing data, the questionnaires should be returned to respective interviewers for re-interviewing. For every interview completed, the interviewers will fill up an Interview Report form to discuss, among others, factors that may have an implication on the data quality, e.g. if the respondent had difficulty recalling or retrieving information; if he/she used documents or references to answer the questions; if there were observers or kibitzers during the interview; and so on.

The same procedures for handling of sensitive issues will be employed in implementing the surveys to comply both with standards of data quality and research ethics.

SWS recognizes that ensuring the quality of data is more challenging in the case of selfadministered/ online interviews, that is why they will only be utilized as a fallback method. Since the interviewer will have minimal control on how the respondent will accomplish the questionnaire, instructions, including skipping directions, must be succinct and clear. The respondent will be informed of the possibility that the interviewer will get back to him/her in case of missing information or clarifications.

In addition, other key personnel (including the Project Team Leader/ Co-Team Leader, and Data Processing Manager) will also observe/ monitor the fieldwork. If there is a need to conduct an end-of-fieldwork assessment in selected areas (for

instance, in case a field team encounters problems that may have a bearing on data quality and must therefore be properly addressed and documented), the key personnel will be in charge of facilitating these assessments.

## Other Processing

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Data encoding and validation.

In assembling the data encoding and cleaning teams, SWS will rely in large part on its current roster of data encoders with extensive experience, from prior surveys of SWS, in encoding survey data, cross-checking for consistency, and cleaning the data.

When the completed sheets are received at the SWS office in Quezon City for data processing, Office Data Editors will conduct consistency checks on all completed sheets prior to coding and encoding. For open-ended questions, with the assistance of the client, codes are created based on the answers obtained.

A data entry program will be prepared while fieldwork is ongoing. SWS uses a data entry program which is developed in-house designed to flag errors or inconsistencies in data. Range-rules as well as skip and fill applications are incorporated in the data entry program to ensure that encoded responses are within defined limits.

While data are being encoded, SWS will periodically get a random sample of already encoded questionnaires and examine them for the accuracy of their recording in the database. SWS will also ensure that the encoding program has built in checks for consistency and completeness.

During the encoding and processing of data, mechanisms to ensure accuracy in will also be put in place. The data entry program will have built in checks for consistency and completeness. SWS will also use a "100% data validation" strategy, wherein data validators or checkers (a group separate from the encoders) will compare all encoded data on computer screen vis-à-vis the completed questionnaires to make sure that they match. Errors will promptly noted and corrected.

In event that an interviewer or encoder is found to be falsifying or manipulating data, he or she will be replaced.

## Data Appraisal

No content available